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Economic and environmental questions: transport of dangerous goods

Work of the Committee of Experts on the Transport of Dangerous Goods and on the Globally Harmonized System of Classification and Labelling of Chemicals

Report of the Secretary-General

Summary

In accordance with Economic and Social Council resolution 645 G (XXIII), the Secretary-General reports biennially to the Council on the work of the Committee of Experts on the Transport of Dangerous Goods and on the Globally Harmonized System of Classification and Labelling of Chemicals, and of its two subcommittees.

The present report concerns the work of the Committee of Experts during the biennium 2013-2014 and the implementation of Economic and Social Council resolution 2013/25.

In accordance with that resolution, the secretariat has published the eighteenth revised edition of the *Recommendations on the Transport of Dangerous Goods: Model Regulations*, amendment 2 to the fifth revised edition of the *Recommendations on the Transport of Dangerous Goods: Manual of Tests and Criteria* and the fifth revised edition of the *Globally Harmonized System of Classification and Labelling of Chemicals*.

All the main legal instruments and codes governing the international transport of dangerous goods by sea, air, road, rail or inland waterway have been amended accordingly, with effect from 1 January 2015, and many Governments have also transposed the provisions of the Model Regulations into their own legislation for domestic traffic for application from 2015.

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Many Governments and international organizations have revised or taken steps to revise existing national and international legislation in order to implement the Globally Harmonized System as soon as possible.

The Committee adopted amendments to the Model Regulations and the *Manual of Tests and Criteria*, which consist mainly of new or revised provisions that concern the transport of viscous liquids; gases; polymerizing substances; internal combustion engines or machinery powered by flammable liquids or gases; electric vehicles; and lithium batteries and ammonia dispensing systems.

The Committee also adopted amendments to the Globally Harmonized System that include a new hazard class for desensitized explosives and a new hazard category for pyrophoric gases; miscellaneous provisions intended to clarify the criteria for some hazard classes (explosives, specific target organ toxicity following single exposure, aspiration hazard and hazardous to the aquatic environment); additional information to be included in the Safety Data Sheet (section 9); revised and further rationalized precautionary statements; and a new example in annex 7 addressing the labelling of small packagings.

The Committee recommended that the secretariat be requested to collect information on the contact details of competent authorities responsible for national regulations applicable to the transport of dangerous goods by modes of transport other than by air or sea and of national authorities competent for authorizing the allocation of the "UN" approval mark on packagings and tanks that meet the specifications of the *Recommendations on the Transport of Dangerous Goods: Model Regulations*.

The Committee adopted a programme of work for the biennium 2015-2016; sessions for the Subcommittee of Experts on the Transport of Dangerous Goods, for the Subcommittee of Experts on the Globally Harmonized System of Classification and Labelling of Chemicals and for the Committee have been planned for the period 2015-2016, in accordance with Economic and Social Council resolution 1999/65.

The Committee is recommending a draft resolution on its work for adoption by the Economic and Social Council.

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I. Draft resolution for adoption by the Economic and Social Council

1. The Committee of Experts on the Transport of Dangerous Goods and on the Globally Harmonized System of Classification and Labelling of Chemicals recommends to the Economic and Social Council the adoption of the following draft resolution:

Work of the Committee of Experts on the Transport of Dangerous Goods and on the Globally Harmonized System of Classification and Labelling of Chemicals

The Economic and Social Council,

Recalling its resolutions 1999/65 of 26 October 1999 and 2013/25 of 25 July 2013,

Having considered the report of the Secretary-General on the work of the Committee of Experts on the Transport of Dangerous Goods and on the Globally Harmonized System of Classification and Labelling of Chemicals during the biennium 2013-2014,[1]

A
Work of the Committee regarding the transport of dangerous goods

Recognizing the importance of the work of the Committee of Experts on the Transport of Dangerous Goods and on the Globally Harmonized System of Classification and Labelling of Chemicals for the harmonization of codes and regulations relating to the transport of dangerous goods,

Bearing in mind the need to maintain safety standards at all times and to facilitate trade, as well as the importance of these issues to the various organizations responsible for modal regulations, while meeting the growing concern for the protection of life, property and the environment through the safe and secure transport of dangerous goods,

Noting the ever-increasing volume of dangerous goods being introduced into worldwide commerce and the rapid expansion of technology and innovation,

Recalling that, while the major international instruments governing the transport of dangerous goods by the various modes of transport and many national regulations are now better harmonized with the Model Regulations annexed to the Committee's recommendations on the transport of dangerous goods, further work on harmonizing these instruments is necessary to enhance safety and to facilitate trade, and recalling also that uneven progress in the updating of national inland transport legislation in some countries of the world continues to present serious challenges to international multimodal transport,

1. *Expresses its appreciation* for the work of the Committee of Experts on the Transport of Dangerous Goods and on the Globally Harmonized System of

[1] E/2015/66.

Classification and Labelling of Chemicals with respect to matters relating to the transport of dangerous goods, including their security in transport;

2. *Requests* the Secretary-General:

(a) To circulate the new and amended recommendations on the transport of dangerous goods[2] to the Governments of Member States, the specialized agencies, the International Atomic Energy Agency and other international organizations concerned;

(b) To publish the nineteenth revised edition of the *Recommendations on the Transport of Dangerous Goods: Model Regulations*[3] and the sixth revised edition[4] of the *Recommendations on the Transport of Dangerous Goods: Manual of Tests and Criteria* in all the official languages of the United Nations, in the most cost-effective manner, no later than the end of 2015;

(c) To make those publications available in book and electronic format and on the website of the Economic Commission for Europe,[5] which provides secretariat services to the Committee;

3. *Invites* all Governments, the regional commissions, the specialized agencies, the International Atomic Energy Agency and the other international organizations concerned to transmit to the secretariat of the Committee their views on the work of the Committee, together with any comments that they may wish to make on the recommendations on the transport of dangerous goods;

4. *Invites* all interested Governments, the regional commissions, the specialized agencies and the international organizations concerned to take into account the recommendations of the Committee when developing or updating appropriate codes and regulations;

5. *Requests* the Committee to study, in consultation with the International Maritime Organization, the International Civil Aviation Organization, the regional commissions and the intergovernmental organizations concerned, the possibilities of improving the implementation of the Model Regulations on the transport of dangerous goods in all countries for the purposes of ensuring a high level of safety and eliminating technical barriers to international trade, including through the further harmonization of international agreements or conventions governing the international transport of dangerous goods;

6. *Invites* all Governments, as well as the regional commissions and organizations concerned, the International Maritime Organization and the International Civil Aviation Organization to provide feedback to the Committee regarding differences between the provisions of national, regional or international legal instruments and those of the Model Regulations, in order to enable the Committee to develop cooperative guidelines for enhancing consistency between these requirements and reducing unnecessary impediments; to identify existing substantive and international, regional and national differences, with the aim of reducing those differences in modal treatment to the greatest extent practical and ensuring that where differences are necessary they do not pose impediments to the

[2] See ST/SG/AC.10/42/Add.1 and 2.

[3] ST/SG/AC.10/1/Rev.19.

[4] ST/SG/AC.10/11/Rev.6.

[5] www.unece.org/trans/danger/danger.html.

safe and efficient transport of dangerous goods; and to undertake an editorial review of the Model Regulations and various modal instruments with the aim of improving clarity, user friendliness and ease of translation;

B

Mutual administrative support for monitoring compliance of UN-marked containment systems with the *Recommendations on the Transport of Dangerous Goods: Model Regulations*

Noting with satisfaction that, owing to the effective implementation of the *Recommendations on the Transport of Dangerous Goods: Model Regulations* through national, regional and international legally binding instruments, as described in paragraph 8 of the report of the Secretary-General, dangerous goods that are moved internationally have to be contained in packagings, containers and tanks bearing a "UN" mark certifying that they correspond to a design type that has been successfully tested under the control of the competent authority of the State authorizing the allocation of the mark,

Noting with concern that irregularities in, or forgery of, certification of "UN" packagings have been observed in international transport, leading to the use of packagings that do not meet the required performance level and increasing the risk of dramatic accidents that would affect the public, workers, means of transport, properties and the environment,

Recalling the basic principle laid down by the Committee that "The competent authority should ensure compliance with these Regulations. Means to discharge this responsibility include the establishment and execution of a programme for monitoring the design, manufacture, testing, inspection and maintenance of packaging, the classification of dangerous goods and the preparation, documentation, handling and stowage of packages by consignors and carriers, to provide evidence that the provisions of the Model Regulations are being met in practice",

Recognizing that mutual administrative assistance between the competent authorities of countries concerned would facilitate investigations and improve compliance assurance, but is currently prevented owing to lack of information on the contact details of competent authorities at the worldwide level,

1. *Requests* the Secretary-General:

(a) To seek information from all States Members of the United Nations, and other States if appropriate, on the contact details of:

(i) The competent authorities responsible for national regulations applicable to the transport of dangerous goods by modes of transport other than by air or by sea;

(ii) The competent authorities (and their country identification codes) allowing, in the name of the State, the allocation of the "UN" mark on packagings, pressure receptacles, bulk containers and portable tanks;

(b) To develop and maintain up to date the lists of contact details;

(c) To make this information available on the website of the secretariat of the Economic Commission for Europe,[5] which provides secretariat services to the Committee;

2. *Invites* all Member States to provide the requested information;

C
Work of the Committee regarding the Globally Harmonized System of Classification and Labelling of Chemicals

Bearing in mind that in paragraph 23 (c) of the Plan of Implementation of the World Summit on Sustainable Development (Johannesburg Plan of Implementation),[6] countries were encouraged to implement the Globally Harmonized System of Classification and Labelling of Chemicals as soon as possible with a view to having the system fully operational by 2008,

Bearing in mind also that the General Assembly, in its resolution 57/253 of 20 December 2002, endorsed the Johannesburg Plan of Implementation and requested the Economic and Social Council to implement the provisions of the Plan relevant to its mandate and, in particular, to promote the implementation of Agenda 21[7] by strengthening system-wide coordination,

Noting with satisfaction:

(a) That the Economic Commission for Europe and all United Nations programmes and specialized agencies concerned with chemical safety in the field of transport or of the environment, in particular the United Nations Environment Programme, the International Maritime Organization and the International Civil Aviation Organization, have already taken appropriate steps to amend or update their legal instruments in order to give effect to the Globally Harmonized System of Classification and Labelling of Chemicals or are considering amending them as soon as possible;

(b) That the International Labour Organization, the Food and Agriculture Organization of the United Nations and the World Health Organization are also taking appropriate steps to adapt their existing chemical safety recommendations, codes and guidelines to the Globally Harmonized System, in particular in the areas of occupational health and safety, pesticide management and the prevention and treatment of poisoning;

(c) That national legislation or standards implementing the Globally Harmonized System (or allowing its application) in one or several sectors other than transport have already been issued in Australia (2011), Brazil (2009), China (2010), Ecuador (2009), Japan (2006), Mauritius (2004), Mexico (2011), New Zealand (2001), the Republic of Korea (2006), the Russian Federation (2010), Serbia (2010), Singapore (2008), South Africa (2009), Switzerland (2009), Thailand (2012), the United States of America (2012), Uruguay (2009), Viet Nam (2009) and Zambia

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[6] *Report of the World Summit on Sustainable Development, Johannesburg, South Africa, 26 August-4 September 2002* (United Nations publication, Sales No. E.03.II.A.1 and corrigendum), chap. I, resolution 2, annex.

[7] *Report of the United Nations Conference on Environment and Development, Rio de Janeiro, 3-14 June 1992, vol. I, Resolutions Adopted by the Conference* (United Nations publication, Sales No. E.93.I.8 and corrigendum), resolution 1, annex II.

(2013), as well as in the 28 countries members of the European Union and the 3 countries members of the European Economic Area (2008);[8]

(d) That work on the development or revision of national legislation, standards or guidelines applicable to chemicals in the implementation of the Globally Harmonized System continues in other countries, while in some others activities related to the development of sectoral implementation plans or national implementation strategies are being conducted or are expected to be initiated soon;[8]

(e) That a number of United Nations programmes and specialized agencies and regional organizations, in particular the United Nations Institute for Training and Research, the International Labour Organization, the World Health Organization, the Economic Commission for Europe, the Asia-Pacific Economic Cooperation, the Organization for Economic Cooperation and Development, Governments, the European Union and non-governmental organizations representing the chemical industry, have organized or contributed to multiple workshops, seminars and other capacity-building activities at the international, regional, subregional and national levels, in order to raise administration, health sector and industry awareness and to prepare for or support the implementation of the Globally Harmonized System;

Aware that effective implementation will require further cooperation between the Subcommittee of Experts on the Globally Harmonized System of Classification and Labelling of Chemicals and the international bodies concerned, continued efforts by the Governments of Member States, cooperation with the industry and other stakeholders, and significant support for capacity-building activities in countries with economies in transition and developing countries,

Recalling the particular significance of the United Nations Institute for Training and Research, the International Labour Organization and the Organization for Economic Cooperation and Development Global Partnership for Capacity-building to Implement the Globally Harmonized System of Classification and Labelling of Chemicals for building capacities at all levels,

1. *Commends* the Secretary-General on the publication of the fifth revised edition of the *Globally Harmonized System of Classification and Labelling of Chemicals*[9] in the six official languages of the United Nations, in book form and on CD-ROM, and its availability, together with related informational material, on the website of the Economic Commission for Europe[5] which provides secretariat services to the Committee of Experts on the Transport of Dangerous Goods and on the Globally Harmonized System of Classification and Labelling of Chemicals;

2. *Expresses its deep appreciation* to the Committee, the Economic Commission for Europe, United Nations programmes, specialized agencies and other organizations concerned for their fruitful cooperation and their commitment to the implementation of the Globally Harmonized System;

[8] Information on implementation of the Globally Harmonized System by country and through international legal instruments, recommendations, codes and guidelines is available from www.unece.org/trans/danger/publi/ghs/implementation_e.html.

[9] United Nations publication, Sales No. 13.II.E.1.

3. *Requests* the Secretary-General:

(a) To circulate the amendments[10] to the fifth revised edition[9] of the *Globally Harmonized System of Classification and Labelling of Chemicals* to the Governments of Member States, the specialized agencies and other international organizations concerned;

(b) To publish the sixth revised edition[11] of the *Globally Harmonized System of Classification and Labelling of Chemicals* in all the official languages of the United Nations in the most cost-effective manner, no later than the end of 2015, and to make it available in book and electronic format and on the website of the Economic Commission for Europe;[5]

(c) To continue to make information on the implementation of the Globally Harmonized System available on the website of the Economic Commission for Europe;[8]

4. *Invites* Governments that have not yet done so to take the necessary steps, through appropriate national procedures and/or legislation, to implement the Globally Harmonized System as soon as possible;

5. *Reiterates its invitation* to the regional commissions, United Nations programmes, specialized agencies and other organizations concerned to promote the implementation of the Globally Harmonized System and, where relevant, to amend their respective international legal instruments addressing transport safety, workplace safety, consumer protection or the protection of the environment, so as to give effect to the Globally Harmonized System through such instruments;

6. *Invites* Governments, the regional commissions, United Nations programmes, specialized agencies and other organizations concerned to provide feedback to the Subcommittee of Experts on the Globally Harmonized System on the steps taken for the implementation of the Globally Harmonized System in all relevant sectors, through international, regional or national legal instruments, recommendations, codes and guidelines, including, when applicable, information about the transitional periods for its implementation;

7. *Encourages* Governments, the regional commissions, United Nations programmes, specialized agencies and other relevant international organizations and non-governmental organizations, in particular those representing industry, to strengthen their support for the implementation of the Globally Harmonized System by providing financial contributions and/or technical assistance for capacity-building activities in developing countries and countries with economies in transition;

D

Programme of work of the Committee

Taking note of the programme of work of the Committee for the biennium 2015-2016 as contained in paragraphs 50 and 51 of the report of the Secretary-General,[1]

[10] ST/SG/AC.10/42/Add.3.

[11] ST/SG/AC.10/30/Rev.6.

Noting the relatively poor level of participation of experts from developing countries and countries with economies in transition in the work of the Committee and the need to promote their wider participation in its work,

1. *Decides* to approve the programme of work of the Committee;

2. *Stresses* the importance of the participation of experts from developing countries and from countries with economies in transition in the work of the Committee, calls, in that regard, for voluntary contributions to facilitate their participation, including through support for travel and daily subsistence, and invites Member States and international organizations in a position to do so to contribute;

3. *Requests* the Secretary-General to submit to the Economic and Social Council in 2017 a report on the implementation of the present resolution, the recommendations on the transport of dangerous goods and the Globally Harmonized System of Classification and Labelling of Chemicals.

II. Implementation of Economic and Social Council resolution 2013/25

A. Publications

2. As requested by the Economic and Social Council in its resolution 2013/25, the Secretary-General prepared the eighteenth revised edition[12] of the *Recommendations on the Transport of Dangerous Goods: Model Regulations*. The edition was published for official circulation in Arabic (69 copies), Chinese (50 copies) and Russian (106 copies), and for official circulation and sale in English (1,093 copies), French (309 copies) and Spanish (159 copies).

3. Amendment 2 to the fifth revised edition[13] of the *Recommendations on the Transport of Dangerous Goods: Manual of Tests and Criteria* was published for official circulation in Arabic (74 copies), Chinese (60 copies) and Russian (90 copies) and for official circulation and sale in English (987 copies), French (179 copies) and Spanish (119 copies).

4. The fifth revised edition[9] of the *Globally Harmonized System of Classification and Labelling of Chemicals* was published for official circulation in Arabic (78 copies), Chinese (69 copies) and Russian (95 copies) and for official circulation and sale in English (1,115 copies), French (270 copies) and Spanish (176 copies).

5. Combined versions of the *Model Regulations*, the *Manual of Tests and Criteria* and the *Globally Harmonized System of Classification and Labelling of Chemicals* were also made available on a CD-ROM containing the English and French versions.

6. The *Model Regulations*, the *Manual of Tests and Criteria* and the *Globally Harmonized System* are available online in all languages on the website of the Economic Commission for Europe (ECE).[5]

[12] United Nations publication, Sales No. 13.VIII.1 and corrigenda.

[13] Ibid., Sales No. 13.VIII.3.

B. Implementation of the *Recommendations on the Transport of Dangerous Goods: Model Regulations*

7. In its resolution 2013/25, the Economic and Social Council invited all interested Governments, the regional commissions, the specialized agencies and the international organizations concerned, when developing or updating appropriate codes and regulations, to take into account the recommendations of the Committee.

8. The provisions of the eighteenth revised edition[12] of the *Model Regulations* have been incorporated into the following international instruments:

(a) International Maritime Organization (IMO): International Maritime Dangerous Goods Code, amendment 37-14 (mandatory application for the 162 contracting parties to the International Convention for the Safety of Life at Sea from 1 January 2016, with the possibility of application on a voluntary basis from 1 January 2015);

(b) International Civil Aviation Organization (ICAO): 2015-2016 edition of the Technical Instructions for the Safe Transport of Dangerous Goods by Air (mandatory application for the 191 contracting parties to the Convention on International Civil Aviation from 1 January 2015);

(c) International Air Transport Association: Dangerous Goods Regulations 2015 (fifty-sixth edition) (applicable from 1 January 2015);

(d) ECE: European Agreement concerning the International Carriage of Dangerous Goods by Road (applicable from 1 January 2015, 48 contracting parties);

(e) ECE: European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways (applicable from 1 January 2015, 18 contracting parties);

(f) Intergovernmental Organization for International Carriage by Rail: Regulations concerning the International Carriage of Dangerous Goods by Rail (appendix C to the Convention concerning International Carriage by Rail) (applicable from 1 January 2015, 41 contracting parties).

9. In the member States of the European Union, the provisions of the European Agreement concerning the International Carriage of Dangerous Goods by Road, the Regulations concerning the International Carriage of Dangerous Goods by Rail and the European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways, as amended, also apply to domestic traffic from 1 January 2015.[14]

10. The Common Market of the South (MERCOSUR) countries (Argentina, Brazil, Paraguay and Uruguay) are applying an agreement on the inland transportation of dangerous goods (Acuerdo para la Facilitación del Transporte de Mercancías Peligrosas en el MERCOSUR) based on the twelfth revised edition[15] of the *Model Regulations*, the Regulations concerning the International Carriage of

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[14] Commission Directive 2014/103/EU of 21 November 2014, adapting for the third time the annexes to Directive 2008/68/EC of the European Parliament and of the Council on the inland transport of dangerous goods to scientific and technical progress (*Official Journal of the European Union*, L 335/15, 22 November 2014).

[15] United Nations publication, Sales No. E.01.VIII.4.

Dangerous Goods by Rail and the European Agreement concerning the International Carriage of Dangerous Goods by Road.

11. The Andean Community (Colombia, Ecuador, Peru and Plurinational State of Bolivia) have developed draft regulations based on the thirteenth revised edition[16] of the *Model Regulations*, the European Agreement concerning the International Carriage of Dangerous Goods by Road (2005) and the Regulations concerning the International Carriage of Dangerous Goods by Rail (2005), which are still under consideration.

12. In 1997, the Economic and Social Commission for Asia and the Pacific published the *Guidelines for the Establishment of National and Regional Systems for Inland Transportation of Dangerous Goods*,[17] recommending the implementation of the recommendations on the transport of dangerous goods. The transport ministers of the Association of Southeast Asian Nations (ASEAN) signed, on 20 September 2002, Protocol No. 9 to the ASEAN Framework Agreement on the Facilitation of Goods in Transit. The Protocol provides for the simplification of procedures and requirements for the transit transport of dangerous goods in ASEAN countries, using the Model Regulations and the European Agreement concerning the International Carriage of Dangerous Goods by Road. Annex I (Transport of dangerous goods) of the Greater Mekong Subregion Cross-Border Transport Agreement also requires the use of the Model Regulations and the European Agreement concerning the International Carriage of Dangerous Goods by Road for cross-border transport.

13. In 1999, the Central African Economic and Monetary Community (Cameroon, Central African Republic, Chad, Democratic Republic of the Congo, Equatorial Guinea and Gabon) adopted regulations concerning the transport of dangerous goods by road that are partly based on old provisions of the European Agreement concerning the International Carriage of Dangerous Goods by Road but that are not fully in line with the Model Regulations.

14. With respect to domestic inland transport of dangerous goods in individual countries, except as described above, implementation of the recommendations on the transport of dangerous goods may vary considerably depending on the national procedures for enacting law or updating regulations. For example, the regulations applicable in the United States of America (Title 49 of the Code of Federal Regulations) are normally updated on a yearly basis and they have been updated to reflect the eighteenth revised edition[12] of the *Model Regulations*, with very few exceptions. The Canadian regulations reflect the eighteenth revised edition[12] of the *Model Regulations*. The *Australian Code for the Transport of Dangerous Goods by Road and Rail* (edition 7.3, 2014) is based on the seventeenth revised edition[18] of the *Model Regulations*. The twelfth revised edition[15] of the *Model Regulations*[15] has been adopted as a national standard in Malaysia and has been implemented through national legislation in Brazil. The regulations for road transport in Thailand are based on the 2013 edition of the European Agreement concerning the International Carriage of Dangerous Goods by Road[19] (reflecting the seventeenth revised edition[18] of the *Model Regulations*) and are currently being updated to reflect the

[16] Ibid., Sales No. E.03.VIII.5.
[17] Ibid., Sales No. E.98.II.F.49.
[18] Ibid., Sales No.E.11.VIII.1.
[19] Ibid., Sales No. E.12.VIII.1.

European Agreement concerning the International Carriage of Dangerous Goods by Road (2015 edition)[20] and the eighteenth revised edition[12] of the *Model Regulations*.

15. Although international transport of dangerous goods is facilitated by the harmonization of the major international conventions and agreements concerning the transport of dangerous goods with the Model Regulations, and their simultaneous updating, the fact that certain national regulations applicable to inland transport are not brought into line simultaneously, or completely, is still causing problems in international trade, in particular in the case of multimodal transport. For that reason, the Committee has maintained in its draft programme of work an item on global harmonization of regulations on the transport of dangerous goods with the Model Regulations.

16. Owing to the legally binding nature of the legal instruments based on the Model Regulations applicable to the international transport of dangerous goods, as listed in paragraph 8 above, packagings and tanks used for such international transport must conform to a design type complying with the construction and test requirements of the Model Regulations and approved by a competent authority. Such packagings and tanks bear a "UN" mark identifying, inter alia, the country that has approved the design type and the manufacturer. However, certain incidents or accidents have shown that certain packagings or tanks bearing the "UN" mark did not meet the requirements and that it was not always easy for the competent authorities in the country where the incident or accident occurred to contact the competent authority of the country where the packaging or tank was approved. The IMO, ICAO and ECE secretariats collect information on the contact details of competent authorities responsible for the enforcement of their respective international legal instruments, but the information is missing in many countries not only as regards approval of packagings and tanks, but also, more generally, as regards the competent authorities for the application of national regulations concerning land (road, rail, inland waterways) transport of dangerous goods. **Action recommended by the Committee to be taken by the Economic and Social Council with respect to this issue is reflected in part B, paragraphs 1 and 2, of the draft resolution contained in paragraph 1 of the present report.**

C. Implementation of the Globally Harmonized System of Classification and Labelling of Chemicals

17. The World Summit on Sustainable Development, held in 2002 in Johannesburg, in paragraph 23 (c) of its Plan of Implementation,[6] encouraged countries to implement the Globally Harmonized System of Classification and Labelling of Chemicals as soon as possible with a view to having the system fully operational by 2008.

18. Since the Globally Harmonized System addresses several sectors (transport, consumers, occupational health and safety and the environment), its effective implementation requires significant efforts from Member States to amend many existing legal texts concerning chemical safety in each sector or to enact new legislation.

[20] Ibid., Sales No. E.14.VIII.1.

19. In the transport sector, the Model Regulations have already been updated to reflect the relevant provisions of the fifth revised edition[9] of the *Globally Harmonized System*. All the major international instruments listed in paragraph 8 above have also been amended accordingly for effective application in 2015, as have all national regulations that are based on those instruments or that are regularly updated on the basis of the Model Regulations.

20. In the other sectors, the situation is more complex, because implementation requires the amendment or revision of a considerable number of different legal texts and guidelines for application.

21. Legal instruments or national standards implementing the Globally Harmonized System (or allowing its application) in one or several sectors have already been issued in Australia (2012), Brazil (2009), China (2010), Ecuador (2009), Japan (2006), Mauritius (2004), Mexico (2011), New Zealand (2001), the Republic of Korea (2006), the Russian Federation (2010), Serbia (2010), Singapore (2008), South Africa (2009), Switzerland (2009), Thailand (2012), the United States (2012), Uruguay (2009), Viet Nam (2009) and Zambia (2013), as well as in the 28 countries members of the European Union and the 3 countries members of the European Economic Area (2008).

22. Countries that have already implemented the Globally Harmonized System continue to update the legal instruments or national standards implementing the System, in accordance with the provisions of the revised editions of the *Globally Harmonized System*. For instance, between June 2013 and June 2014, the European Union published the fourth,[21] fifth[22] and sixth[23] adaptations of Regulation (EC) 1272/2008[24] to technical and scientific progress, aligning it with the provisions introduced by the fourth[25] and fifth[9] revised editions of the *Globally Harmonized System*. In 2014, Zambia also completed the alignment of its national standard on the Globally Harmonized System with the provisions of the fourth revised edition.[25]

23. Work on the revision and amendment of legal texts, standards and guidelines to achieve the implementation of the Globally Harmonized System as soon as possible continues in other countries.

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[21] Commission Regulation (EU) No. 487/2013 of 8 May 2013 amending, for the purposes of its adaptation to technical and scientific progress, Regulation (EC) No. 1272/2008 of the European Parliament and of the Council on classification, labelling and packaging of substances and mixtures (*Official Journal of the European Union, L149/1 of 1 June 2013*).

[22] Commission Regulation (EU) No. 944/2013 of 2 October 2013 amending, for the purposes of its adaptation to technical and scientific progress, Regulation (EC) No. 1272/2008 of the European Parliament and of the Council on classification, labelling and packaging of substances and mixtures (*Official Journal of the European Union, L261/5 of 3 October 2013*).

[23] Commission Regulation (EU) No. 605/2014 of 5 June 2014 amending, for the purposes of introducing hazard and precautionary statements in the Croatian language and its adaptation to technical and scientific progress, Regulation (EC) No. 1272/2008 of the European Parliament and of the Council on classification, labelling and packaging of substances and mixtures (*Official Journal of the European Union, L167/36 of 6 June 2014*).

[24] Regulation (EC) No. 1272/2008 of the European Parliament and of the Council of 16 December 2008 on classification, labelling and packaging of substances and mixtures, amending and repealing Directives 67/548/EEC and 1999/45/EC, and amending Regulation (EC) No. 1907/2006 (*Official Journal of the European Union, L353/1 of 31 December 2008*).

[25] United Nations publication, Sales No. E.11.II.E.6.

24. Legislative amendments to implement the Globally Harmonized System in the workplace in Canada received royal assent on 19 June 2014. The amended legislation and regulations are expected to come into force on or before 1 June 2015, with a transitional period for implementation. The proposed regulations will substantially harmonize Canadian classification and hazard communication in respect of workplace chemicals with those of the United States and other countries that have already implemented the Globally Harmonized System.

25. A regional Globally Harmonized System policy was agreed upon and signed by the ministries of trade and industry of the Southern African Development Community (SADC) member countries in 2012 for implementation of the Globally Harmonized System by January 2020.

26. Projects and activities relating to the implementation of the Globally Harmonized System were completed, initiated or continued during the period 2013-2014 in several countries (see paras. 29-31 below).

27. In order to monitor the status of implementation of the Globally Harmonized System, the secretariat has placed on its website[8] all the information it has collected from countries. The website provides the possibility for Government administrations to update this information or to submit new information for the various sectors concerned. **All countries are therefore invited to provide such information, as indicated in paragraph 6 of part C of the draft resolution contained in paragraph 1 above.**

28. Direct technical advice and expertise have been provided to stakeholders by some Member States and by the secretariat.

29. The Swedish Chemicals Agency, within the framework of its international development cooperation programme on chemicals management, assisted Tunisia in the implementation of the Globally Harmonized System and conducted workshops on the enforcement of Globally Harmonized System legislation in South Africa (October 2014), Thailand (April 2014) and Viet Nam (December 2014).

30. The secretariat was invited to provide information about the Globally Harmonized System, its status of implementation and the work of the Committee of Experts and its two subcommittees, at several seminars, conferences or workshops organized by industry associations, private institutions, or governmental or United Nations bodies in Belgium (April 2013), Colombia (February and May 2014), the Democratic Republic of the Congo (January 2014), Guatemala (February 2014), Kenya (June 2013), Mexico (February 2014), Spain (February 2013) and the United Kingdom of Great Britain and Northern Ireland (November 2013).

31. With the logistic, technical or financial support of several Member States, international organizations (International Labour Organization (ILO) the United Nations Environment Programme (UNEP), World Health Organization (WHO)), intergovernmental organizations (Organization for Economic Cooperation and Development (OECD) and the European Union), governmental agencies and the private sector, several additional capacity-building and training activities or projects were conducted, in particular:

(a) Within the framework of the United Nations Institute for Training and Research (UNITAR)/ILO Global Capacity-building Programme on the Globally Harmonized System and the UNITAR/ILO/OECD World Summit on Sustainable

Development Global Partnership for Capacity-building to Implement the Globally Harmonized System:

(i) Country-based projects were completed in Barbados, the Gambia, the Republic of the Congo and Zambia and were initiated or continued in Benin, Bolivia (Plurinational State of), Cameroon, Chile, Colombia, the Democratic Republic of the Congo, Guatemala, Haiti, Kiribati, Kyrgyzstan, Madagascar, Mali, Mexico, Tajikistan, Togo and Tunisia;

(ii) Regional projects and activities were conducted in the Caribbean and South-East Asian countries. These projects and activities included:

a. Development of a subregional Globally Harmonized System capacity assessment and a regional implementation strategy for the Caribbean region;

b. A Globally Harmonized System review conference for South-East Asia followed by a one-day Globally Harmonized System training workshop for the occupational and health sector;

c. A regional campaign on chemical safety for consumers in the countries of South-East Asia;

(iii) Development and updating of guidance, training and resource materials:

a. Updating of the existing guidance materials in accordance with the provisions of the fifth revised edition of the *Globally Harmonized System* is ongoing;

b. Work on the adaptation of the training courses to e-learning courses has been completed and three rounds of e-learning courses have been conducted;

c. Ongoing development of a management scheme for implementing the Globally Harmonized System as part of the Inter-Organization Programme for the Sound Management of Chemicals Toolbox for Decision-making in Chemicals Management;

(b) Asia-Pacific Economic Cooperation: meetings of the Chemical Dialogue and follow-up meetings of various working groups where Globally Harmonized System implementation issues are under consideration;

(c) Within the framework of the Inter-Organization Programme for the Sound Management of Chemicals:

(i) Development of the Inter-Organization Programme for the Sound Management of Chemicals Toolbox for Decision-making in Chemicals Management (various organizations of the Inter-Organization Programme for the Sound Management of Chemicals);

(ii) All newly prepared or updated International Chemical Safety Cards have included Globally Harmonized System labelling since 2006 (currently 440 chemicals) (WHO/ILO);

(iii) Incorporation of Globally Harmonized System classification into recommended restrictions on the availability and use of pesticides used for

locus control (Food and Agriculture Organization of the United Nations (FAO)/WHO).

32. The Subcommittee of Experts on the Globally Harmonized System has also continued its cooperation with treaty bodies that administer certain international conventions dealing with specific aspects of chemical safety in order to facilitate the implementation of the Globally Harmonized System through such conventions (Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and their Disposal; Montreal Protocol on Substances that Deplete the Ozone Layer; Stockholm Convention on Persistent Organic Pollutants; Rotterdam Convention on the Prior Informed Consent Procedure for Certain Hazardous Chemicals and Pesticides in International Trade; and Convention on the Transboundary Effects of Industrial Accidents).

III. Work of the Committee of Experts on the Transport of Dangerous Goods and on the Globally Harmonized System of Classification and Labelling of Chemicals during the biennium 2013-2014

A. Meetings held

33. The following meetings were held during the biennium 2013-2014:

(a) Subcommittee of Experts on the Transport of Dangerous Goods: forty-third session, 24 to 28 June 2013 (ST/SG/AC.10/C.3/86 and Add.1); forty-fourth session, 25 November to 4 December 2013 (ST/SG/AC.10/C.3/88); forty-fifth session, 23 June to 2 July 2014 (ST/SG/AC.10/C.3/90 and Add.1); and forty-sixth session, 1 to 9 December 2014 (ST/SG/AC.10/C.3/92);

(b) Subcommittee of Experts on the Globally Harmonized System of Classification and Labelling of Chemicals: twenty-fifth session, 1 to 3 July 2013 (ST/SG/AC.10/C.4/50); twenty-sixth session, 4 to 6 December 2013 (ST/SG/AC.10/C.4/52); twenty-seventh session, 2 to 4 July 2014 (ST/SG/AC.10/C.4/54); and twenty-eighth session, 10 to 12 December 2014 (ST/SG/AC.10/C.4/56);

(c) Committee of Experts on the Transport of Dangerous Goods and on the Globally Harmonized System of Classification and Labelling of Chemicals: seventh session, 12 December 2014 (ST/SG/AC.10/42 and Add.1-3).

34. The following 29 countries participated in the work of the Committee as full members of the Subcommittee of Experts on the Transport of Dangerous Goods or the Subcommittee of Experts on the Globally Harmonized System of Classification and Labelling of Chemicals or of both Subcommittees: Argentina, Australia, Austria, Belgium, Brazil, Canada, China, Finland, France, Germany, Italy, Japan, Kenya, the Netherlands, New Zealand,[26] Norway, Poland, Portugal, Qatar,[26] the Republic of Korea, the Russian Federation, Serbia,[26] South Africa, Spain, Sweden, Switzerland,[27] the United Kingdom, the United States and Zambia.[26]

[26] Subcommittee of Experts on the Globally Harmonized System of Classification and Labelling of Chemicals only.

[27] Subcommittee of Experts on the Transport of Dangerous Goods only.

35. India, Mexico and Morocco, full members of the Subcommittee of Experts on the Transport of Dangerous Goods, Denmark, Greece, Nigeria, Senegal and Ukraine, full members of the Subcommittee of Experts on the Globally Harmonized System of Classification and Labelling of Chemicals, and the Czech Republic and the Islamic Republic of Iran, full members of both Subcommittees, did not participate.

36. The Governments of Bulgaria, Ireland[27], Luxembourg,[27] New Zealand,[27] Romania, Slovakia, Switzerland,[26] Thailand, the former Yugoslav Republic of Macedonia[27] and Zambia[27] were represented by observers. The European Union, eight specialized agencies and intergovernmental organizations and 45 non-governmental organizations also participated.

37. Liaison was maintained with the international bodies or organizations responsible for individual modes of transport, in particular ECE, ICAO, IMO and the Intergovernmental Organization for International Carriage by Rail.

38. The Committee paid special attention to the coordination of its own activities with those of other international organizations whose activities impinge on the field of transport of dangerous goods or of classification and labelling of chemicals, such as the International Atomic Energy Agency (IAEA), the Universal Postal Union (UPU), ILO, WHO, UNITAR and OECD, to ensure that their work would complement, rather than duplicate or clash with, its own activities and recommendations.

39. Secretariat services were provided by the secretariat of ECE.

B. Work of the Subcommittee of Experts on the Transport of Dangerous Goods

40. During the biennium 2013-2014, the Subcommittee discussed various questions related to its terms of reference in accordance with the programme of work laid out in document E/2013/51, in paragraph 47 (a).

41. On the basis of that work, the Committee adopted amendments[2] to the eighteenth revised edition[12] of the *Recommendations on the Transport of Dangerous Goods: Model Regulations* and to the fifth revised edition[28] of the *Recommendations on the Transport of Dangerous Goods: Manual of Tests and Criteria* consisting mainly of new or revised provisions concerning:

(a) The listing and classification of some existing and new dangerous substances and articles (for example, fireworks, polymerizing substances, internal combustion engines and machinery, organic peroxides, polyester resin kits, radiation detectors and ammonia dispensers), related packing and test methods, and the revision of some packing and tank requirements;

(b) Electric storage systems (including testing, packing and marking of lithium batteries);

(c) The testing of explosives;

[28] United Nations publication, Sales No.E.09.VIII.3.

(d) Packing instructions for liquids or liquefied gases charged with compressed gases;

(e) The applicability of International Organization for Standardization standards to the manufacture of new pressure receptacles or service equipment.

42. The Subcommittee updated guiding principles intended to explain the rationale behind the provisions contained in the Model Regulations and to guide regulators when assigning transport requirements to specific dangerous goods.

43. The Subcommittee considered the issue of possible further measures to facilitate global harmonization of regulations on the transport of dangerous goods with the Model Regulations already discussed in the previous biennium (see also para. 15 above). It agreed again that additional efforts should be made to improve harmonization at the worldwide level. **Governments and international organizations concerned are invited to provide feedback by drawing attention to requirements in their national, regional, or international instruments that deviate from the Model Regulations.**

44. **The action recommended by the Committee to be taken by the Economic and Social Council with respect to the work of the Subcommittee of Experts on the Transport of Dangerous Goods is reflected in part A, paragraphs 1 to 6, of the draft resolution contained in paragraph 1 of the present report.**

C. Work of the Subcommittee of Experts on the Globally Harmonized System of Classification and Labelling of Chemicals

45. During the biennium 2013-2014, the Subcommittee discussed various questions related to its terms of reference in accordance with its programme of work laid out in document E/2013/51, paragraph 47 (b).

46. On the basis of that work, the Committee adopted amendments[10] to the fifth revised edition[9] of the *Globally Harmonized System of Classification and Labelling of Chemicals* intended to update, clarify or to complement the System concerning, in particular, the following:

(a) A new hazard class for desensitized explosives and a new hazard category for pyrophoric gases;

(b) Further clarification of the classification criteria for explosives, specific target organ toxicity following single exposure, aspiration toxicity and hazardous for the aquatic environment;

(c) Examples of labelling of small packagings;

(d) Further rationalization of the precautionary statements;

(e) Information to be included in section 9 of the Safety Data Sheet.

47. The Subcommittee kept under review progress made in the implementation of the Globally Harmonized System on the basis of reports submitted by its members and participating intergovernmental and non-governmental organizations.[8]

48. The Subcommittee continued to cooperate with treaty bodies established under international conventions concerning chemical safety to promote the

implementation of the Globally Harmonized System through such conventions (see also para. 27 above).

49. **The action recommended by the Committee to be taken by the Economic and Social Council with respect to the work of the Subcommittee of Experts on the Globally Harmonized System of Classification and Labelling of Chemicals is reflected in part C, paragraphs 1 to 7, of the draft resolution contained in paragraph 1 of the present report.**

IV. Programme of work and schedule of meetings for the biennium 2015-2016

50. The Committee agreed that the programme of work for the biennium 2015-2016 should be as follows:

(a) Subcommittee of Experts on the Transport of Dangerous Goods:

(i) Explosives and related matters (including amendments to the list of dangerous goods; tests and criteria for flash compositions; review of tests series 6; review of tests in parts I and II of the *Manual of Tests and Criteria*; review of packing instructions for explosives, harmonized standards for security markings; classification of fireworks; classification of articles under UN No. 0349; review of chapter 2.1 of the Globally Harmonized System);

(ii) Listing, classification and packing (including amendments to the list of dangerous goods);

(iii) Electric storage systems (including testing of lithium batteries, transport of large batteries; thermal batteries);

(iv) Transport of gases (including global recognition of United Nations and non-United Nations pressure receptacles);

(v) Miscellaneous proposals of amendments to the Model Regulations (including dangerous goods in machinery, apparatus or articles Not Otherwise Specified, articles containing small quantities of dangerous goods, marking and labelling issues, packaging issues and tank issues);

(vi) Cooperation with IAEA (including transport of radioactive material possessing additional hazards);

(vii) Global harmonization of transport of dangerous goods regulations with the Model Regulations;

(viii) Guiding principles for the Model Regulations (updating, including rationale for assignment of E codes) and development of guidance for the use of the Model Regulations;

(ix) Issues relating to the Globally Harmonized System (including corrosivity criteria; criteria for corrosion to metals; criteria for water-reactivity, classification and testing of oxidizing solids; classification criteria for flammable gases; expert judgement/weight of evidence; references to OECD Guidelines; use of the *Manual of Tests and Criteria* in the context of the Globally Harmonized System);

(b) Subcommittee of Experts on the Globally Harmonized System of Classification and Labelling of Chemicals:

(i) Classification criteria and related hazard communication, including:

a. Explosives and related matters (including the review of chapter 2.1 of the Globally Harmonized System); revision of the test methods in parts I and II of the *Manual of Tests and Criteria*;

b. Revision of the *Manual of Tests and Criteria*;

c. Corrosion of metals (pitting corrosion and suitability of tests C.1 for solids);

d. Water-reactivity;

e. Classification of flammable gases;

f. Use of cellulose for testing oxidizing solids and liquids;

g. Practical classification issues;

h. Corrosivity criteria;

i. Dust explosion hazards;

j. Aspiration hazards: viscosity criterion for classification of mixtures;

k. Nanomaterials;

(ii) Hazard communication issues, including guidance on labelling of small packagings; and improvement of annexes 1-3 and further rationalization of precautionary statements;

(iii) Implementation issues, including:

a. The possible development of a global list of chemicals classified according to the Globally Harmonized System;

b. Activities to facilitate the coordinated implementation of the Globally Harmonized System and monitor its status of implementation;

c. Strengthening and increasing cooperation with United Nations programmes and specialized agencies and regional, governmental and intergovernmental organizations, as well as non-governmental organizations responsible for the administration of international agreements and conventions dealing with the management of chemicals, so as to give effect to the Globally Harmonized System through such instruments;

(iv) Development of guidance on the application of the criteria, as needed, including examples illustrating application of the classification criteria and any related hazard communication issues, and alignment of guidance in annex 9 (section A9.7) and annex 10 to the Globally Harmonized System with the criteria in chapter 4.1;

(v) Capacity-building, including:

a. Reviewing reports on training and capacity-building activities;

b. Providing assistance to United Nations programmes and specialized agencies involved in training and capacity-building activities, such as UNITAR, ILO, FAO and the WHO/International Programme on Chemical Safety, through the development of guidance materials, advice with respect to their training programmes and identification of available expertise and resources.

51. Bearing in mind that, in accordance with Economic and Social Council resolution 1999/65, the maximum number of meeting days allocated to the Committee and its subsidiary bodies is 38 (76 meetings), the Committee agreed that the schedule of meetings for the period 2015-2016 should be as follows:

2015

22-26 June 2015: Subcommittee of Experts on the Transport of Dangerous Goods, forty-seventh session (10 meetings)

29 June-1 July (morning) 2015: Subcommittee of Experts on the Globally Harmonized System of Classification and Labelling of Chemicals, twenty-ninth session (5 meetings)

30 November-9 December (morning)[29] 2015: Subcommittee of Experts on the Transport of Dangerous Goods, forty-eighth session (15 meetings)

9 (afternoon)[29]-11 December 2015: Subcommittee of Experts on the Globally Harmonized System of Classification and Labelling of Chemicals, thirtieth session (5 meetings)

Total: Subcommittee of Experts on the Transport of Dangerous Goods:

25 meetings; Subcommittee of Experts on the Globally Harmonized System of Classification and Labelling of Chemicals: 10 meetings

2016

27 June-6 July (morning)[29] 2016: Subcommittee of Experts on the Transport of Dangerous Goods, forty-ninth session (15 meetings)

6 (afternoon)[29]-8 July 2016: Subcommittee of Experts on the Globally Harmonized System of Classification and Labelling of Chemicals, thirty-first session (5 meetings)

28 November-6 December 2016: Subcommittee of Experts on the Transport of Dangerous Goods, fiftieth session (14 meetings)

7-9 December (morning) 2016: Subcommittee of Experts on the Globally Harmonized System of Classification and Labelling of Chemicals, thirty-second session (5 meetings)

9 December (afternoon) 2016: Committee, eighth session (1 meeting)

Total: Subcommittee of Experts on the Transport of Dangerous Goods:

[29] With the possibility for both subcommittees to combine their meting allotment and meet jointly for the full day on 9 December 2015 and 6 July 2016.

29 meetings[29]; Subcommittee of Experts on the Globally Harmonized System of Classification and Labelling of Chemicals: 10 meetings; Committee: 1 meeting

52. **Action recommended by the Committee to be taken by the Economic and Social Council with respect to its programme of work is reflected in part D, paragraphs 1 to 3, of the draft resolution contained in paragraph 1 of the present report.**